

REMARKS

Status of Claims and Support for Amendments

Claims 1 and 5 have been amended to incorporate limitations on the recited electrodes. Since the amendments to claim 1 would otherwise leave dependent claim 2 as not further limiting, claim 2 has necessarily been canceled. Claim 4 depended from claim 2 consequently has been canceled. Claim 6, which depends from claim 5, has been added to recite, as did former claim 2 and as does present, original claim 3, the wafer holder of its parent claim, installed in a semiconductor manufacturing device.

Claims 1, 3, 5 and 6 are thus pending.

Support from the amendments to claims 1 and 5 is found in part in original claim 2, and in full in paragraphs [0020] through [0022] of the specification.

Claim Rejections – 35 U.S.C. § 102

Claims 1 and 3 remain rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 6,133,557 to Kawanabe et al.

Claim 1 has been amended to recite

electrodes for supplying power to said electrical circuit, said electrodes being separated by an interval that is 10% or more of the thickness of the wafer holder body, and in such a manner that in use the wafer-carrying surface has a temperature uniformity of within ± 1 percent, the substance of said electrodes being one or more metals selected from the group consisting of tungsten, molybdenum and tantalum, and said electrodes having superficially formed thereon an oxidation-resistant coating of at least one metal selected from the group consisting of nickel, gold and silver.

Applicants, making no admission as to the materiality of *Kawanabe et al.* to claim 1 previously, respectfully submit that *Kawanabe et al.* certainly cannot now be said to anticipate claim 1.

Claim 3 recites a wafer holder defined by claim 1, but limited to being installed in a semiconductor manufacturing device. Thus properly depending from a claim 1 that distinguishes over *Kawanabe et al.*, claim 3 also distinguishes over the reference.

In making the present rejection and earlier rejections, the Office has maintained, "The limitation of the temperature uniformity being within ± 1 percent is *an intended use* limitation." (Emphasis added.) Applicants' undersigned representative respectfully disagrees. While the claimed temperature uniformity might be achieved otherwise, novelty in the present invention lies in the discovery of a marriage between certain configurational and material conditions on wafer holders, and the temperature uniformity achieved by the wafer holders.

And the wafer holder performance is evaluated when the holder is *in use*—in its art-defined use; the present invention in no way stipulates that the wafer holder performance is evaluated during some special *intended use*. The claimed temperature uniformity is only apparent, naturally, when the claimed device is *in use*—the phrase accordingly recited in claims 1 and 5 as part of the properly limiting recitation of the result achieved.

The structurally limiting result recited in claims 1 and 5 does not arise owing to the use itself, or to any particular method of operating a wafer holder. Indeed, if the present invention was a method of using wafer holders so as to impart a novel result, Applicants would have filed claims directed to such a method. Yet the only methods that Applicants have described in the present specification are of manufacturing, not of operating, the subject wafer holders.

The present specification makes very clear that the configurational and material conditions married to achieving the resultant temperature uniformity under the present invention *are delimited by that very result itself*. Accordingly, claims 1 and 5 have been amended to recite

electrodes . . . being separated by an interval that is 10% or more of the thickness of the wafer holder body, and in such a manner that in use the wafer-carrying surface has a temperature uniformity of within ± 1 percent.

In particular, the phrase, "*and in such a manner that*" makes clear that the recitation that this phrase introduces *further limits*—additionally limits—the claim elements. The Office is now courteously urged to consider this aspect of the claim recitations. That is, under Section 2 of the action the Office in making the § 102(b) rejection states,

The [*Kawanabe et al.*] wafer holder is 200 mm diameter and 10 mm thick The 10% of [the] thickness is 1 mm. The spacing between the electrodes therefore would be several times the minimum required distance.

Nevertheless, *Kawanabe et al.* nowhere discloses, teaches, or even suggests a wafer holder comprising "electrodes . . . separated by an interval that is 10% or more of the thickness of the wafer holder body, *and in such a manner* that in use the wafer-carrying surface has a temperature uniformity of within ± 1 percent." In particular, while the electrodes illustrated in *Kawanabe et al.* do appear to be closer to the susceptor edge than not, and thus are likely separated by more than 1 mm across the 200 mm span of the susceptor, *Kawanabe et al.* nowhere discloses, teaches, or suggests that the electrodes are *also* separated *in such a manner* that in use the wafer-carrying surface of the *Kawanabe et al.* susceptor has a temperature uniformity of within ± 1 percent.

Applicants' undersigned representative is well aware that because identity of structure is under U.S. practice presumed to entail identity of results, functions, properties, etc., the Office's position has been that from a showing that *Kawanabe et al.* discloses the structure recited in claim 1 of the present application, it would necessarily follow that *Kawanabe et al.* structure achieves the an identity of result.

It is respectfully pointed out that such reasoning misses the point, because the result recited in claims 1 and 5 *itself limits* the claimed structure. Hence, it is respectfully submitted that the Office has not, in fact, made a showing of identity of structure between that of any prior art of record and that of the present invention as claimed, because the temperature-uniformity result as now recited in claims 1 and 5 so limits the structure of the present invention as would require a prior-art recognition of the relationship in order for the prior art to disclose an identity of structure. The Office to date has not made a showing of any such prior-art recognition.

And should the Office then counter that the temperature uniformity, recited in claims 1 and 5 as further limiting the recited configurational and material conditions of the claimed wafer holder, is the optimization of a result-effective variable, Applicants' undersigned representative would respectfully counter that the Office must for the record present evidence demonstrating that the variable—wafer holder electrode spacing in a particular combination of other configurational and material conditions—was known in the art to achieve the result. (Reference is made to MPEP 2144.05.) To be proper, such evidence would have to show that a person skilled in the art would have been aware of the marriage between a temperature uniformity of within ± 1 percent, and the configurational and material conditions, as recited in claims 1 and 5, that the temperature uniformity thus imposes on a wafer holder.

More important, to allege that temperature uniformity under the present invention is a result-effective variable is to put the cart before the horse, because temperature uniformity as claimed in the present application is a *parameter-conditioning result*, not the result of parameter conditioning.

In sum, it is respectfully submitted that the recited temperature uniformity now clearly further limits the scope of the present claims, such that the references of record neither alone nor in combination *prima facie* disclose, teach, or suggest the configurational and material conditions recited in claims 1 and 5.

Claim Rejections – 35 U.S.C. § 103

Claims 2 and 4; *Kawanabe et al.* in view of Shamoulian et al. '814

Claims 2 and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kawanabe et al.* in view of U.S. Pat. No. 6,572,814 to Shamoulian et al.

Claims 2 and 4 have been canceled.

Claim 5; Niori et al '156 in view of *Kawanabe et al.*

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,280,156 to Niori et al., in view of *Kawanabe et al.*

It is respectfully submitted that for the same reasons, presented above, why claim 1 distinguishes over *Kawanabe et al.* claim 5 distinguishes over *Niori et al.* alone, and thus also in combination with *Kawanabe et al.*

Moreover, claims 1 and 5 are now limited by certain material conditions on the claimed electrodes, and each likewise recites that

the substance of said electrodes [is] one or more metals selected from the group consisting of tungsten, molybdenum and tantalum, and said electrodes having superficially formed thereon an oxidation-resistant coating of at least one metal selected from the group consisting of nickel, gold and silver.

Claim 5 thus clearly distinguishes over the cited prior art.

Finally, it is noted that claim 5 differs from claim 1 only in the recitation of a *plurality* of electrical circuits, and *at least three* electrodes, with *each pair* of electrodes being separated as claimed. Nevertheless, the Office has rejected claim 5—and not claim 1—separately under § 103(a), over the combination of *Niori et al.* and *Kawanabe et al.* Hence, the Office's acknowledging that *Niori et al.* do not teach or suggest anything as to the purity of an aluminum nitride wafer holder but *Kawanabe et al.* does could equally be said regarding claim 1; yet as just submitted, claim 5 distinguishes over *Niori et al.* for the same reasons that claim 1 would. Thus,

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even if claim 1 had also been rejected under this section of the Office action, both of the independent claims in this application—claims 1 and 5—distinguish for the same reasons, applied *mutatis mutandis*, over *Niori et al.* that the claims do over *Kawanabe et al.*, and thus also over the two references in combination.

Accordingly, Applicant courteously urges that this application is in condition for allowance. Reconsideration and withdrawal of the rejections is requested. Favorable action by the Examiner at an early date is solicited.

Respectfully submitted,

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/James Judge/

James W. Judge
Registration No. 42,701

JUDGE & MURAKAMI IP ASSOCIATES
Dojima Building, 7th Floor
6-8 Nishitemma 2-Chome, Kita-ku
Osaka-shi 530-0047
JAPAN

Telephone: **305-938-7119**
Voicemail/Fax: **703-997-4565**